

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A plating method for a printed circuit board comprising:

a first step of providing a substrate having a plurality of connection pads and circuit patterns connected to the connection pads;

a second step of using some of the circuit patterns provided on a surface of the substrate as a power connection portion and connecting the power connection portion to an external power source;

a third step of covering a surface of the substrate excepting the connection pads with a plating resistance resist to shield it;

a fourth step of supplying power to the connection pads through the power connection portion and forming a gold-plated layer on the connecting pad; and

a fifth step of ~~making~~ disconnecting the power connection portion ~~and from~~ the external power source ~~to be electrically short~~.

2. (Currently Amended) The method of claim 1, wherein the second step comprises:
coating a photoresist at the surface of the substrate;
removing a portion of the photoresist to expose the connection pad and exposing
some of the circuit patterns to form a power connection portion; and
coating ~~an electrolyte~~ a conductive layer on the surface of the substrate for
connecting between the power connection portion and ~~an~~ the external power source.
3. (Currently Amended) The method of claim 2, wherein the power
connection portion is formed by removing a photoresist from a portion of the circuit
pattern, and receives power by being connected to the ~~electrolyte~~ conductive layer.
4. (Currently Amended) The method of claim 2, wherein the conductive layer
is an electrolyte layer ~~is~~-formed through an electroless plating method.
5. (Currently Amended) The method of claim 2, wherein the ~~electrolyte~~
conductive layer has a thickness of $0.3 \sim 0.7 \mu\text{m}$.

6. (Currently Amended) The method of claim 2, wherein the electrolyte conductive layer is formed to have a desired thickness by additionally performing an electrolytic plating method on the formed electrolyte conductive layer.

7. (Currently Amended) The method of claim 2, wherein, in the third step, the plating resistance resist is coated on the surface of the substrate formed with the electrolyte conductive layer.

8. (Currently Amended) The method of claim 2, wherein the fifth step comprises:

removing the electrolyte conductive layer and the plating resistance resist; and
coating a photoresist on the surface of the electrolyte layer and the plating resistance resist-removed substrate to cover the power connection portion to ~~make power~~
~~short~~.

9. (Currently Amended) A plating method for a printed circuit board comprising:

a first step of providing a substrate having a plurality of bonding pads and ball pads at both sides thereof and a circuit pattern to which the bonding pads and the ball pads are connected;

a second step of using some of the circuit patterns provided at the surface of the substrate as first and second power connection portions and connecting the first power connection portion to an external power source;

a third step of covering the surface of the substrate with the ball pad formed thereon with a plating resistance resist to shield it;

a fourth step of supplying power to the bonding pad through the first power connection portion for forming a gold-plated layer on the bonding pad;

a fifth step of ~~making the first power connection portion and the external power source to be electrically short~~ removing the connection from the external power source to the first power connection portion;

a sixth step of connecting the second power connection portion to the external power source and coating a plating resistance resist at the surface of the substrate with the bonding pad formed thereon to shield it;

a seventh step of supplying power to the ball pad through the second power connection portion for forming a gold-plated layer on the ball pad; and

an eighth step of ~~making the second power connection portion and the external power source to be electrically short~~ removing the connection from the external power source to the second power connection portion.

10. (Currently Amended) The method of claim 9, wherein the second step comprises:

coating a photoresist on both surfaces of the substrate;
removing a portion of the photoresist to expose the bonding pad and the ball pad and exposing some of the circuit patterns to form each of the first and second connection portion; and

coating ~~an electrolyte~~ a conductive layer on the surface of the substrate where the ball pad is formed in order to connect the first power connection portion to ~~an~~ the external power source.

11. (Currently Amended) The method of claim 10, wherein the first and second power connection portion is formed by removing a photoresist from a portion of the circuit pattern, and receives power by being connected to the ~~electrolyte~~ conductive layer.

12. (Currently Amended) The method of claim 10, wherein the ~~electrolyte~~
conductive layer is formed through an electroless plating method.

13. (Currently Amended) The method of claim 10, wherein the ~~electrolyte~~
conductive layer has a thickness of $0.3 \sim 0.7 \mu\text{m}$.

14. (Currently Amended) The method of claim 10, wherein the ~~electrolyte~~
conductive layer is formed to have a desired thickness by additionally performing an
electrolytic plating method on the formed ~~electrolyte~~conductive layer.

15. (Currently Amended) The method of claim 10, wherein, in the third step,
the plating resistance resist is coated on the surface of the substrate with the ~~electrolyte~~
conductive layer formed thereon.

16. (Currently Amended) The method of claim 10, wherein the fifth step
comprises :

removing the ~~electrolyte~~conductive layer and the plating resistance resist; and

coating a photoresist at the surface of the ~~electrolyte~~conductive layer and the plating resistance resists-removed substrate to cover and insulate the power connection portion to ~~make power short~~ in the substrate.

17. (Original) The method of claim 9, wherein the sixth step comprises:
forming an electrolyte layer at the surface of the substrate where the bonding pad is formed to electrically connect it to the second power connection portion; and
coating a plating resistance resist on a surface of the electrolyte layer.

18. (Currently Amended) The method of claim 10, wherein the eighth step comprises:

removing the plating resistance resist and the ~~electrolyte~~conductive layer; and
covering the second power connection portion with a photoresist to make the second power connection to be ~~short electrically~~ insulated in the substrate.

19. (New) The method of claim 1, wherein the fifth step comprises:
removing the plating resistance resist; and
coating a photoresist on the surface of the plating resistance resist-removed
substrate to cover and insulate the power connection portion in the substrate.